



C045SEQLIST.TXT

SEQUENCE LISTING

<110> Biogen Idec Ma Inc.
NSGene
Johansen, Teit E.
Sah, Dinah Wen-Yee
Rossomando, Anthony

<120> Novel Neurotrophic Factors

<130> C045 US CP2

<140> 10/661,984
<141> 2003-09-12

<150> PCT
<151> 2002-02-28

<150> Danish 1998 00904
<151> 1998-07-06

<150> 60/092229
<151> 1998-07-09

<150> Danish 1998 01048
<151> 1998-08-19

<150> 60/097774
<151> 1998-08-25

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<221> misc_structure
<222> (661)...(663)
<223> CARBOHD: Glycosylated Asparagine at Asn87

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 <222> (426)...(623)
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<221> misc_structure
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<221> misc_structure
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<221> misc_structure
 <222> (616)...(619)
 <223> DISULFID: Cys72-Cys72 interchain disulfide bridge

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 atg cct gcc ctg tgg ccc acc ctg gcc gct ctg gct ctg ctg agc agc 167
 Met Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala Leu Leu Ser Ser
 -20 -15 -10 -5

gtc gca gag gcc tcc ctg ggc tcc gcg ccc cgc agc cct gcc ccc cgc 215
 Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser Pro Ala Pro Arg
 1 5 10

gaa ggc ccc ccg cct gtc ctg gcg tcc ccc gcc ggc cac ctg ccg ggg 263
 Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly His Leu Pro Gly
 15 20 25

gga cgc acg gcc cgc tgg tgc agt gga aga gcc cgcc cgcc cgc cgc 311
 Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Arg Arg
 30 35 40

aga cac ttc tcg gcc cgc gcc ccc gcc tgc acc ccc atc tgc tct 359
 Arg His Phe Ser Ala Arg Ala Pro Ala Ala Cys Thr Pro Ile Cys Ser
 45 50 55 60

tcc ccg cgg gtc cgc gcg ccg ctg ggg ggc ccg gca gcg cgc tcg 407
 Ser Pro Arg Val Arg Ala Ala Arg Leu Gly Gly Arg Ala Ala Arg Ser
 65 70 75

ggc agc ggg ggc gcg ggg tgc cgc ctg cgc tcg cag ctg gtg ccg gtg 455
 Gly Ser Gly Gly Ala Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val
 80 85 90

cgc gcg ctc ggc ctg ggc cac cgc tcc gac gag ctg gtg cgt ttc cgc 503
 Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg
 95 100 105

ttc tgc acc ggc tcc tgc ccg cgc gcg cgc tct cca cac gac ctc agc 551
 Phe Cys Thr Gly Ser Cys Pro Arg Ala Arg Ser Pro His Asp Leu Ser
 110 115 120

ctg gcc agc cta ctg ggc gcc ggg gcc ctg cga ccg ccc ccg ggc tcc 599
 Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser
 125 130 135 140

cgg ccc gtc agc cag ccc tgc tgc cga ccc acg cgc tac gaa gcg gtc 647
 Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val
 145 150 155

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tcc ttc atg gac gtc aac agc acc tgg aga acc gtc gac cgc ctc tcc 695
Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser
160 165 170

gcc acc gcc tgc ggc tgc ctg ggc tgagggctcg ctccaggctt ttgcagactg 749
Ala Thr Ala Cys Gly Cys Leu Gly
175 180

gacccttacc ggtggctctt cctgcctggg accctccgc agagtcac tagccagcgg 809
cctcagccag ggacgaaggc ctcaaagctg agaggccct gcccgtgggt gatgga 865

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<212> PRT

<213> Homo Sapiens

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20 25 30
Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly His Leu Pro Gly
35 40 45
Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Arg Arg
50 55 60
Arg His Phe Ser Ala Arg Ala Pro Ala Ala Cys Thr Pro Ile Cys Ser
65 70 75 80
Ser Pro Arg Val Arg Ala Ala Arg Leu Gly Gly Arg Ala Ala Arg Ser
85 90 95
Gly Ser Gly Gly Ala Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val
100 105 110
Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg
115 120 125
Phe Cys Thr Gly Ser Cys Pro Arg Ala Arg Ser Pro His Asp Leu Ser
130 135 140
Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser
145 150 155 160
Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val
165 170 175
Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser
180 185 190
Ala Thr Ala Cys Gly Cys Leu Gly
195 200

<210> 3

<211> 861

<212> DNA

<213> Homo Sapiens

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<221> CDS

<222> (7)...(717)

<221> 5'UTR

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<222> (718)...(861)

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 <221> misc_structure
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 <223> CARBOHYD: Glycosylated Asparagine as ASN122

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 <222> (424)...(621)
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 <221> misc_structure
 <222> (505)...(705)
 <223> DISULFID: Cys70-Cys136 disulfide bridge

 <221> misc_structure
 <222> (517)...(711)
 <223> DISULFID: Cys74-Cys138 disulfide bridge

 <221> misc_structure
 <222> (616)...(618)
 <223> DISULFID: Cys107-Cys107 interchain disulfide bridge

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gagccc atg ccc ggc ctg atc tca gcc cga gga cag ccc ctc ctt gag						48
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-55 -50 -45						
gtc ctt cct ccc caa gcc cac ctg ggt gcc ctc ttt ctc cct gag gct						96
Val Leu Pro Pro Gln Ala His Leu Gly Ala Leu Phe Leu Pro Glu Ala						
-40 -35 -30						
cca ctt ggt ctc tcc gcg cag cct gcc ctg tgg ccc acc ctg gcc gct						144
Pro Leu Gly Leu Ser Ala Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala						
-25 -20 -15						
ctg gct ctg ctg agc agc gtc gca gag gcc tcc ctg ggc tcc gcg ccc						192
Leu Ala Leu Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro						
-10 -5 1 5						
cgc agc cct gcc ccc cgc gaa ggc ccc ccg cct gtc ctg gcg tcc ccc						240
Arg Ser Pro Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro						
10 15 20						
gcc ggc cac ctg ccg ggg gga cgc acg gcc cgc tgg tgc agt gga aga						288
Ala Gly His Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg						
25 30 35						
gcc cgg cgg ccg ccg cag cct tct ccg ccc gcg ccc ccg ccg cct						336
Ala Arg Arg Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro						
40 45 50						
gca ccc cca tct gct ctt ccc cgc ggg ggc cgc gcg gcg ccg gct ggg						384
Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly						
55 60 65 70						

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ggc ccg ggc aac cgc gct cgg gca gcg ggg ggc cg_g ggc tgc cgc ctg 432
 Gly Pro Gly Asn Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu
 75 80 85

cgc tcg cag ctg gtg ccg gtg cgc ggc ctc ggc ctg ggc cac cgc tcc 480
 Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser
 90 95 100

gac gag ctg gtg cgt ttc cgc ttc tgc agc ggc tcc tgc cgc cgc gcg 528
 Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala
 105 110 115

cgc tct cca cac gac ctc agc ctg gcc agc cta ctg ggc gcc ggg gcc 576
 Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala
 120 125 130

ctg cga ccg ccc ccg ggc tcc cgg ccc gtc agc cag ccc tgc tgc cga 624
 Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg
 135 140 145 150

ccc acg cgc tac gaa gcg gtc tcc ttc atg gac gtc aac agc acc tgg 672
 Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp
 155 160 165

aga acc gtg gac cgc ctc tcc gcc aac ccc tgc ggc tgc ctg ggc 717
 Arg Thr Val Asp Arg Leu Ser Ala Asn Pro Cys Gly Cys Leu Gly
 170 175 180

tgagggctcg ctccagggct ttgcagactg gacccttacc ggtggctctt cctgcctggg 777
 accctccgc agagtcac tagccagcgg cctcagccag ggacgaaggc ctcaaagctg 837
 agaggccct gccgggtgggt gatg 861

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 <213> Homo Sapiens

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 20 25 30
 Gly Leu Ser Ala Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala
 35 40 45
 Leu Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser
 50 55 60
 Pro Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly
 65 70 75 80
 His Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg
 85 90 95
 Arg Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Ala Pro
 100 105 110
 Pro Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro
 115 120 125
 Gly Asn Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser
 130 135 140
 Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu
 145 150 155 160
 Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser
 165 170 175
 Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg
 180 185 190

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Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr
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Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr
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Val Asp Arg Leu Ser Ala Asn Pro Cys Gly Cys Leu Gly
225 230 235

<210> 5

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<213> Homo Sapiens

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<221> VARIANT

<222> 134, 135

<223> Xaa = Any Amino Acid

<400> 5

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20 25 30
Asn Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln
35 40 45
Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu
50 55 60
Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro
65 70 75 80
His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro
85 90 95
Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg
100 105 110
Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val
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130 135 140

<210> 6

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<212> PRT

<213> Homo Sapiens

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<221> VARIANT

<222> 110, 111

<223> Xaa = Any Amino Acid

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20 25 30
Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly
35 40 45
Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu
50 55 60
Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser
65 70 75 80
Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp

C045SEQLIST.TXT

85 90 95
Val Asn Ser Thr Trp Arg .Thr Val Asp Arg Leu Ser Ala Xaa Xaa Cys
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Gly Cys Leu Gly
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<210> 7
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<213> Homo Sapiens

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<221> VARIANT
<222> 107, 108
<223> Xaa = Any Amino Acid

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20 25 30
Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg
35 40 45
Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala
50 55 60
Gly Ala Leu Arg Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys
65 70 75 80
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85 90 95
Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Xaa Xaa Cys Gly Cys Leu
100 105 110
Gly

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<221> 5'UTR
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<221> 3'UTR
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C045SEQLIST.TXT

<221> misc_structure
 <222> (661)...(663)
 <223> CARBOHYD: Glycosylated asparagine at Asn122

<221> misc_structure
 <222> (424)...(621)
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<221> misc_structure
 <222> (505)...(705)
 <223> DISULFID: Gly70-Gly136 disulfide bridge

<221> misc_structure
 <222> (517)...(711)
 <223> DISULFID: Gly74-Gly138 disulfide bridge

<221> misc_structure
 <222> (616)...(618)
 <223> DISULFID: Gly107-Gly107 interchain disulfide bridge

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 Glu Leu Gly Leu Gly Leu Ser Thr Leu Ser His Cys Pro Trp Pro
 -35 -30 -25

agg cgg cag cct gcc ctg tgg ccc acc ctg gcc gct ctg gct ctg ctg 156
 Arg Arg Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala Leu Leu
 -20 -15 -10

agc agc gtc gca gag gcc tcc ctg ggc tcc gcg ccc cgc agc cct gcc 204
 Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser Pro Ala
 -5 1 5 10

ccc cgc gaa ggc ccc ccg cct gtc ctg gcg tcc ccc gcc ggc cac ctg 252
 Pro Arg Glu Gly Pro Pro Val Leu Ala Ser Pro Ala Gly His Leu
 15 20 25

ccg ggg gga cgc acg gcc cgc tgg tgc agt gga aga gcc cgg cgg ccg 300
 Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro
 30 35 40

ccg ccg cag cct tct ccg ccc gcg ccc ccg ccg cct gca ccc cca tct 348
 Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Ala Pro Pro Ser
 45 50 55

gct ctt ccc cgc ggg ggc cgc gcg gct ggg ggc cgc ggc agc 396
 Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro Gly Ser
 60 65 70

cgc gct cgg gca gcg ggg gcg cgg ggc tgc cgc ctg cgc tcg cag ctg 444
 Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu
 75 80 85 90

gtg ccg gtg cgc gcg ctc ggc ctg ggc cac cgc tcc gac gag ctg gtg 492
 Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val
 95 100 105

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110 115 120	
gac ctc agc ctc ggc agc cta ctg ggc gcc ggg ggc ctg cga ccg ccc	588
Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro	
125 130 135	
ccg ggc tcc cgg ccc gtc agc cag ccc tgc tgc cga ccc acg cgc tac	636
Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr	
140 145 150	
gaa gcg gtc tcc ttc atg gac gtc aac agc acc tgg aga acc acc gtg gac	684
Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp	
155 160 165 170	
cgc ctc tcc gcc acc gcc tgc ggc tgc ctg ggc tgagggctcg ctccagggct	737
Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly	
175 180	

ttgcagactg gacccttacc ggtggctttt cctgcctggg accctccgc agagtcccac	797
tagccagcg tagccagccag ggacgaaggc ctcaaagctg agaggccctt accggtgtgggt	857
gatg	861

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<211> 220
<212> PRT
<213> Homo Sapiens

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Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser Pro	
35 40 45	
Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly His	
50 55 60	
Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg	
65 70 75 80	
Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro Pro	
85 90 95	
Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro Gly	
100 105 110	
Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln	
115 120 125	
Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu	
130 135 140	
Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro	
145 150 155 160	
His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro	
165 170 175	
Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg	
180 185 190	
Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val	
195 200 205	
Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly	
210 215 220	

<210> 10
<211> 140
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C045SEQLIST.TXT

<213> Homo Sapiens

<220>

<221> CARBOHYD

<222> (122)...(122)

<223> glycosylated asparagine

<400> 10

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				20				25				30			
Ser	Arg	Ala	Arg	Ala	Ala	Gly	Ala	Arg	Gly	Cys	Arg	Leu	Arg	Ser	Gln
	35					40					45				
Leu	Val	Pro	Val	Arg	Ala	Leu	Gly	Leu	Gly	His	Arg	Ser	Asp	Glu	Leu
	50					55				60					
Val	Arg	Phe	Arg	Phe	Cys	Ser	Gly	Ser	Cys	Arg	Arg	Ala	Arg	Ser	Pro
	65				70				75			80			
His	Asp	Leu	Ser	Leu	Ala	Ser	Leu	Leu	Gly	Ala	Gly	Ala	Leu	Arg	Pro
	85					90				95					
Pro	Pro	Gly	Ser	Arg	Pro	Val	Ser	Gln	Pro	Cys	Cys	Arg	Pro	Thr	Arg
	100					105				110					
Tyr	Glu	Ala	Val	Ser	Phe	Met	Asp	Val	Asn	Ser	Thr	Trp	Arg	Thr	Val
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Asp	Arg	Leu	Ser	Ala	Thr	Ala	Cys	Gly	Cys	Leu	Gly				
	130					135				140					

<210> 11

<211> 116

<212> PRT

<213> Homo Sapiens

<220>

<221> CARBOHYD

<222> (98)...(98)

<223> glycosylated asparagine

<400> 11

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	20					25			30						
Leu	Gly	His	Arg	Ser	Asp	Glu	Leu	Val	Arg	Phe	Arg	Phe	Cys	Ser	Gly
	35					40			45						
Ser	Cys	Arg	Arg	Ala	Arg	Ser	Pro	His	Asp	Leu	Ser	Leu	Ala	Ser	Leu
	50					55			60						
Leu	Gly	Ala	Gly	Ala	Leu	Arg	Pro	Pro	Gly	Ser	Arg	Pro	Val	Ser	
	65					70			75			80			
Gln	Pro	Cys	Cys	Arg	Pro	Thr	Arg	Tyr	Glu	Ala	Val	Ser	Phe	Met	Asp
	85					90			95						
Val	Asn	Ser	Thr	Trp	Arg	Thr	Val	Asp	Arg	Leu	Ser	Ala	Thr	Ala	Cys
	100					105			110						
Gly	Cys	Leu	Gly												
	115														

<210> 12

<211> 113

<212> PRT

<213> Homo Sapiens

<220>

C045SEQLIST.TXT

<221> CARBOHYD
<222> (95)...(95)
<223> glycosylated asparagine

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20 25 30
Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg
35 40 45
Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala
50 55 60
Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys
65 70 75 80
Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser
85 90 95
Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu
100 105 110
Gly

<210> 13
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<212> DNA
<213> Homo Sapiens

<400> 13
cctggccagc ctactggcg ccggggccct gcgaccgccc ccgggctccc ggcccgtag 60
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<210> 14
<211> 220
<212> DNA
<213> Murinae gen. sp.

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cccggtcccc ggccgatcg ccagccctgc tgccggccca ctcgctatga ggccgtctcc 180
ttcatggacg tgaacagcac ctggagaacc gtggaccgccc 220

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<213> Murinae gen. sp.

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cgatccgga ggggtggagcg gccaggtgag ccctgaaagg tggggcgggg cgggggcgt 180
ctggggccca cccccggatc tggtgacgccc ggggctggaa tttgacaccg gacggcggcg 240
ggcaggaggc tgctgaggga tggagttggg ctcggccccc agatgcggcc cgcgggcct 300
gccagcaaca agtccctcg gccccagccc tcgctgcgac tggggcttgg agccctgcac 360
ccaagggcac agacccggctg ccaaggcccc acttttaact aaaagaggcg ctgcccagg 420
cacaactctg ggcattatcc acttgagctt cgggggaaag cccagcactg gtcccaggag 480
aggcgcctag aaggacacgg accaggaccc ctttggatg gagtgaacgc tgagcatgga 540
gtggaaaggaa ctcagttac tacttctcc aaccaccctg gtacccatc ccctgaagta 600

C045SEQLIST.TXT

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tagacgatct	ctgagctcg	ctgagctttg	tttgcacatc	tggagaagtg	agccattgtat	720
tgacccatgt	gcatcgcgaa	gaaacaggtc	ctgccaagca	cctaaacacag	agagcaaggt	780
tctccatcg	agctaccgct	gctgagttga	ctctagctac	tccaaacctcc	tgggtcgctt	840
cgagagactg	gagtggaaagg	aggaataccacaa	aaaggatata	ctaactcatc	tttcagtttg	900
caagctgccc	caggaagagg	gtggggaaac	gggtccacga	aggctctga	tgggagcttc	960
tggagccgaa	agct atg gaa	ctg gga ctt	gca gag cct	act gca ttg	tcc 1010	
	Met Glu Leu	Gly Leu Ala	Glu Pro	Thr Ala	Leu Ser	
1	5	10				
cac tgc ctc cgg cct agg tgg cag tca gcc tgg tgg cca acc cta gct						1058
His Cys Leu Arg Pro Arg Trp Gln Ser Ala Trp Trp Pro Thr Leu Ala						
15	20	25				
gtt cta gcc ctg ctg agc tgc gtc aca gaa gct tcc ctg gac cca atg						1106
Val Leu Ala Leu Leu Ser Cys Val Thr Glu Ala Ser Leu Asp Pro Met						
30	35	40				
tcc cgc agc ccc gcc gct cgc gac ggt ccc tca ccg gtc ttg gcg ccc						1154
Ser Arg Ser Pro Ala Ala Arg Asp Gly Pro Ser Pro Val Leu Ala Pro						
45	50	55	60			
ccc acg gac cac ctg cct ggg gga cac act gcg cat ttg tgc agc gaa						1202
Pro Thr Asp His Leu Pro Gly Gly His Thr Ala His Leu Cys Ser Glu						
65	70	75				
aga acc ctg cga ccc ccg cct cag tct cct cag ccc gca ccc ccg ccg						1250
Arg Thr Leu Arg Pro Pro Pro Gln Ser Pro Gln Pro Ala Pro Pro Pro						
80	85	90				
cct ggt ccc gcg ctc cag tct cct ccc gct gcg ctc cgc ggg gca cgc						1298
Pro Gly Pro Ala Leu Gln Ser Pro Pro Ala Ala Leu Arg Gly Ala Arg						
95	100	105				
gcg gcg cgt gca gga acc cgg agc agc cgc gca cgg acc aca gat gcg						1346
Ala Ala Arg Ala Gly Thr Arg Ser Ser Arg Ala Arg Thr Thr Asp Ala						
110	115	120				
cgc ggc tgc cgc ctg cgc tcg cag ctg gtg ccg gtg agc gcg ctc ggc						1394
Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly						
125	130	135	140			
cta ggc cac agc tcc gac gag ctg ata cgt ttc cgc ttc tgc agc ggc						1442
Leu Gly His Ser Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly						
145	150	155				
tcg tgc cgc cga gca cgc tcc cag cac gat ctc agt ctg gcc agc cta						1490
Ser Cys Arg Arg Ala Arg Ser Gln His Asp Leu Ser Leu Ala Ser Leu						
160	165	170				
ctg ggc gct ggg gcc cta cgg tcg cct ccc ggg tcc cgg ccg atc agc						1538
Leu Gly Ala Gly Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser						
175	180	185				
cag ccc tgc tgc cgg ccc act cgc tat gag gcc gtc tcc ttc atg gac						1586
Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp						
190	195	200				
gtg aac agc acc tgg agg acc gtg gac cac ctc tcc gcc act gcc tgc						1634
Val Asn Ser Thr Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys						
205	210	215	220			
ggc tgt ctg ggc tgaggatgtatctccaa gccttgacactagaccca						1686

C045SEQLIST.TXT

Gly Cys Leu Gly

tgtgttgc	cc tacctggAAC	agctccACCG	ggcctcACTA	accaggAGCC	tcaactcAGC	1746
aggatATG	GA ggctgcAGAG	ctcaggCCCC	aggccggTGA	gtgacAGACG	tcgtcgGCAT	1806
gacagacAGA	GA gtgaaAGATG	tcggAACAC	tgaccaACAG	tcccAGTTG	ttcatggATC	1866
ccagCTCTAC	AG acaggAGGA	aacCTCAGCT	aaAGAGAACT	cctCTGGAG	aatccAGAAA	1926
tggccCTCTG	TC tcctgggAA	tgaATTtGA	agagatATAT	atacatATAT	acattgtAGT	1986
cgcgttgCTG	GC gaccAGCCTG	tgctgAAACC	agtcccgtGT	tcacttGTGG	aagccGAAGC	2046
cctatttATT	AT atttctAAAT	tatttattTA	ctttgAAAAA	aaacggccAA	gtcggcCTCC	2106
ctttagtgAG	GA ggttaATTG	tgatcccGGG				2136

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 <213> Murinae gen. sp.

<400> 16

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															30
Leu	Ser	Cys	Val	Thr	Glu	Ala	Ser	Leu	Asp	Pro	Met	Ser	Arg	Ser	Pro
															45
Ala	Ala	Arg	Asp	Gly	Pro	Ser	Pro	Val	Leu	Ala	Pro	Pro	Thr	Asp	His
															50
Leu	Pro	Gly	Gly	His	Thr	Ala	His	Leu	Cys	Ser	Glu	Arg	Thr	Leu	Arg
															65
Pro	Pro	Pro	Gln	Ser	Pro	Gln	Pro	Ala	Pro	Pro	Pro	Gly	Pro	Ala	
															85
Leu	Gln	Ser	Pro	Pro	Ala	Ala	Leu	Arg	Gly	Ala	Arg	Ala	Ala	Arg	Ala
															100
Gly	Thr	Arg	Ser	Ser	Arg	Ala	Arg	Thr	Thr	Asp	Ala	Arg	Gly	Cys	Arg
															115
Leu	Arg	Ser	Gln	Leu	Val	Pro	Val	Ser	Ala	Leu	Gly	Leu	Gly	His	Ser
															130
Ser	Asp	Glu	Leu	Ile	Arg	Phe	Arg	Phe	Cys	Ser	Gly	Ser	Cys	Arg	Arg
															145
Ala	Arg	Ser	Gln	His	Asp	Leu	Ser	Leu	Ala	Ser	Leu	Leu	Gly	Ala	Gly
															165
Ala	Leu	Arg	Ser	Pro	Pro	Gly	Ser	Arg	Pro	Ile	Ser	Gln	Pro	Cys	Cys
															180
Arg	Pro	Thr	Arg	Tyr	Glu	Ala	Val	Ser	Phe	Met	Asp	Val	Asn	Ser	Thr
															195
Trp	Arg	Thr	Val	Asp	His	Leu	Ser	Ala	Thr	Ala	Cys	Gly	Cys	Leu	Gly
															210
															215
															220

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 <213> Artificial Sequence

<220>
 <223> PCR Primer

<400> 17
 cctggccAGC ctactggg

18

<210> 18
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 <212> DNA
 <213> Artificial Sequence

C045SEQLIST.TXT

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<212> DNA		
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<212> DNA		
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<223> PCR Primer		
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ccaagccac ctgggtgccc tctttctcc		29
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C045SEQLIST.TXT

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catcacccac cggcaggggc ctctcag	27
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gagcccatgc ccggcctgat ctcagcccga ggaca	35
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ccctggctga ggccgctggc tagtgggact ctgc	34
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<221> misc_feature	
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<210> 28	
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<213> Artificial Sequence	
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ctaggagccc atgcc	16
<210> 29	
<211> 351	
<212> DNA	
<213> Homo Sapiens	

C045SEQLIST.TXT

<400> 29
atggctggag gaccgggatc tcgtgctcggt gcagcaggag cacgtggctg tcgtctgcgt 60
tctcaactag tgccgggtcggt tgcaactcggt ctggggacacc gttccgacga actagtaacgt 120
tttcgttttt gttcaggatc ttgtcgctcggt gcacgttctc cgcgtatct atctcttagca 180
tctctactag gagccggagc actaagacccg ccgcccggat ctagacctgt atctcaacct 240
tgttgttagac ctactagata cgaaggatcg tctttcatgg acgtaaactc tacatggaga 300
accgttagata gactatctgc aaccgtatcggt ggctgtctcgatgataata g 351

<210> 30
<211> 414
<212> DNA
<213> Homo Sapiens

<400> 30
atggccatc atcatcatca tcatacatcat catcaactcgatc gcggccatat cgacgacgac 60
gacaaggctg gaggaccggg atctcgatcgatc cgtgcacgatc gagcacgtgg ctgtcgctcg 120
cggtctcaac tagtgccggatc gcgtgcactc ggactggggac accgttccgatc cgaacttagta 180
cggtttcgatc ttgttcagg atcttgcgtatc cgtgcacgtt ctccgcatgatc tctatctcta 240
gcacatctac taggagccgg agcactaaga ccgcccggg gatctagacc tgtatctcaa 300
ccttgggtgtatc gacctactatc atacgaagatc gtatcttca tggacgtaaa ctctacatgg 360
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<210> 31
<211> 39
<212> DNA
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<220>
<223> PCR Primer

<400> 31
aaggaaaaaa gcggccgcca tggaacttgg acttggagg 39

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<220>
<223> PCR Primer

<400> 32
ttttttcctt ggccggccgatc cagcccaaggatc agccgcagg 39

<210> 33
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 33
gagcgagccc tcagcc 16

<210> 34
<211> 224
<212> PRT
<213> Rattus sp.

<400> 34
Met Glu Leu Gly Leu Gly Glu Pro Thr Ala Leu Ser His Cys Leu Arg
1 5 10 15

C045SEQLIST.TXT

Pro Arg Trp Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala Leu
 20 25 30
 Leu Ser Ser Val Thr Glu Ala Ser Leu Asp Pro Met Ser Arg Ser Pro
 35 40 45
 Ala Ser Arg Asp Val Pro Ser Pro Val Leu Ala Pro Pro Thr Asp Tyr
 50 55 60
 Leu Pro Gly Gly His Thr Ala His Leu Cys Ser Glu Arg Ala Leu Arg
 65 70 75 80
 Pro Pro Pro Gln Ser Pro Gln Pro Ala Pro Pro Pro Gly Pro Ala
 85 90 95
 Leu Gln Ser Pro Pro Ala Ala Leu Arg Gly Ala Arg Ala Ala Arg Ala
 100 105 110
 Gly Thr Arg Ser Ser Arg Ala Arg Ala Thr Asp Ala Arg Gly Cys Arg
 115 120 125
 Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly Leu Gly His Ser
 130 135 140
 Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg
 145 150 155 160
 Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly
 165 170 175
 Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser Gln Pro Cys Cys
 180 185 190
 Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr
 195 200 205
 Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
 210 215 220

<210> 35
 <211> 112
 <212> PRT
 <213> Homo Sapiens

<400> 35
 Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg
 1 5 10 15
 Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg
 20 25 30
 Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg
 35 40 45
 Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly
 50 55 60
 Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys
 65 70 75 80
 Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr
 85 90 95
 Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
 100 105 110

<210> 36
 <211> 111
 <212> PRT
 <213> Homo Sapiens

<400> 36
 Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu
 1 5 10 15
 Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser
 20 25 30
 Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala
 35 40 45
 Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala

C045SEQLIST.TXT

50	55	60	
Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg	70	75	80
65			
Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp	85	90	95
Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly	100	105	110

<210> 37
<211> 110
<212> PRT
<213> Homo Sapiens

<400> 37				
Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg	1	5	10	15
Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp	20	25	30	
Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg	35	40	45	
Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu	50	55	60	
Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro	65	70	75	80
Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg	85	90	95	
Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly	100	105	110	

<210> 38
<211> 109
<212> PRT
<213> Homo Sapiens

<400> 38				
Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser	1	5	10	15
Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu	20	25	30	
Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser	35	40	45	
Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg	50	55	60	
Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr	65	70	75	80
Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr	85	90	95	
Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly	100	105		

<210> 39
<211> 108
<212> PRT
<213> Homo Sapiens

<400> 39				
Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln	1	5	10	15
Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu	20	25	30	

C045SEQLIST.TXT

Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro
35 40 45
His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro
50 55 60
Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg
65 70 75 80
Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val
85 90 95
Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
100 105

<210> 40
<211> 107
<212> PRT
<213> Homo Sapiens

<400> 40
Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu
1 5 10 15
Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val
20 25 30
Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His
35 40 45
Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro
50 55 60
Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr
65 70 75 80
Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp
85 90 95
Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
100 105

<210> 41
<211> 106
<212> PRT
<213> Homo Sapiens

<400> 41
Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val
1 5 10 15
Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg
20 25 30
Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp
35 40 45
Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro
50 55 60
Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu
65 70 75 80
Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg
85 90 95
Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
100 105

<210> 42
<211> 105
<212> PRT
<213> Homo Sapiens

<400> 42
Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro
Page 19

C045SEQLIST.TXT

1 5 10 15
Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe
20 25 30
Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu
35 40 45
Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly
50 55 60
Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala
65 70 75 80
Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu
85 90 95
Ser Ala Thr Ala Cys Gly Cys Leu Gly
100 105

<210> 43
<211> 104
<212> PRT
<213> Homo Sapiens

<400> 43
1 5 10 15
Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val
Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg
20 25 30
Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser
35 40 45
Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser
50 55 60
Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val
65 70 75 80
Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser
85 90 95
Ala Thr Ala Cys Gly Cys Leu Gly
100

<210> 44
<211> 103
<212> PRT
<213> Homo Sapiens

<400> 44
1 5 10 15
Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg
Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe
20 25 30
Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu
35 40 45
Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg
50 55 60
Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser
65 70 75 80
Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala
85 90 95
Thr Ala Cys Gly Cys Leu Gly
100

<210> 45
<211> 102
<212> PRT
<213> Homo Sapiens

C045SEQLIST.TXT

<400> 45

Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala
1 5 10 15
Leu Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys
20 25 30
Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala
35 40 45
Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Gly Ser Arg Pro
50 55 60
Val Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe
65 70 75 80
Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr
85 90 95
Ala Cys Gly Cys Leu Gly
100

<210> 46

<211> 101

<212> PRT

<213> Homo Sapiens

<400> 46

Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu
1 5 10 15
Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser
20 25 30
Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser
35 40 45
Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Gly Ser Arg Pro Val
50 55 60
Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met
65 70 75 80
Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala
85 90 95
Cys Gly Cys Leu Gly
100

<210> 47

<211> 100

<212> PRT

<213> Homo Sapiens

<400> 47

Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly
1 5 10 15
Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly
20 25 30
Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu
35 40 45
Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser
50 55 60
Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp
65 70 75 80
Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys
85 90 95
Gly Cys Leu Gly
100

<210> 48

C045SEQLIST.TXT

<211> 99
<212> PRT
<213> Homo Sapiens

<400> 48
Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu
1 5 10 15
Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser
20 25 30
Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu
35 40 45
Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln
50 55 60
Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val
65 70 75 80
Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly
85 90 95
Cys Leu Gly

<210> 49
<211> 197
<212> PRT
<213> Homo Sapiens

<400> 49
Met Gln Arg Trp Lys Ala Ala Ala Leu Ala Ser Val Leu Cys Ser Ser
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Val Leu Ser Ile Trp Met Cys Arg Glu Gly Leu Leu Leu Ser His Arg
20 25 30
Leu Gly Pro Ala Leu Val Pro Leu His Arg Leu Pro Arg Thr Leu Asp
35 40 45
Ala Arg Ile Ala Arg Leu Ala Gln Tyr Arg Ala Leu Leu Gln Gly Ala
50 55 60
Pro Asp Ala Met Glu Leu Arg Glu Leu Thr Pro Trp Ala Gly Arg Pro
65 70 75 80
Pro Gly Pro Arg Arg Arg Ala Gly Pro Arg Arg Arg Arg Ala Arg Ala
85 90 95
Arg Leu Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val Arg Val
100 105 110
Ser Glu Leu Gly Leu Gly Tyr Ala Ser Asp Glu Thr Val Leu Phe Arg
115 120 125
Tyr Cys Ala Gly Ala Cys Glu Ala Ala Arg Val Tyr Asp Leu Gly
130 135 140
Leu Arg Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg Val Arg
145 150 155 160
Ala Gln Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val Ser Phe
165 170 175
Leu Asp Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser Ala Arg
180 185 190
Glu Cys Ala Cys Val
195

<210> 50
<211> 156
<212> PRT
<213> Homo Sapiens

<400> 50
Met Ala Val Gly Lys Phe Leu Leu Gly Ser Leu Leu Leu Leu Ser Leu
1 5 10 15

C045SEQLIST.TXT

Gln Leu Gly Gln Gly Trp Gly Pro Asp Ala Arg Gly Val Pro Val Ala
20 25 30
Asp Gly Glu Phe Ser Ser Glu Gln Val Ala Lys Ala Gly Gly Thr Trp
35 40 45
Leu Gly Thr His Arg Pro Leu Ala Arg Leu Arg Arg Ala Leu Ser Gly
50 55 60
Pro Cys Gln Leu Trp Ser Leu Thr Leu Ser Val Ala Glu Leu Gly Leu
65 70 75 80
Gly Tyr Ala Ser Glu Glu Lys Val Ile Phe Arg Tyr Cys Ala Gly Ser
85 90 95
Cys Pro Arg Gly Ala Arg Thr Gln His Gly Leu Ala Leu Ala Arg Leu
100 105 110
Gln Gly Gln Gly Arg Ala His Gly Gly Pro Cys Cys Arg Pro Thr Arg
115 120 125
Tyr Thr Asp Val Ala Phe Leu Asp Asp Arg His Arg Trp Gln Arg Leu
130 135 140
Pro Gln Leu Ser Ala Ala Cys Gly Cys Gly Gly
145 150 155

<210> 51
<211> 211
<212> PRT
<213> Homo Sapiens

<400> 51
Met Lys Leu Trp Asp Val Val Ala Val Cys Leu Val Leu Leu His Thr
1 5 10 15
Ala Ser Ala Phe Pro Leu Pro Ala Gly Lys Arg Pro Pro Glu Ala Pro
20 25 30
Ala Glu Asp Arg Ser Leu Gly Arg Arg Arg Ala Pro Phe Ala Leu Ser
35 40 45
Ser Asp Ser Asn Met Pro Glu Asp Tyr Pro Asp Gln Phe Asp Asp Val
50 55 60
Met Asp Phe Ile Gln Ala Thr Ile Lys Arg Leu Lys Arg Ser Pro Asp
65 70 75 80
Lys Gln Met Ala Val Leu Pro Arg Arg Glu Arg Asn Arg Gln Ala Ala
85 90 95
Ala Ala Asn Pro Glu Asn Ser Arg Gly Lys Gly Arg Arg Gly Gln Arg
100 105 110
Gly Lys Asn Arg Gly Cys Val Leu Thr Ala Ile His Leu Asn Val Thr
115 120 125
Asp Leu Gly Leu Gly Tyr Glu Thr Lys Glu Glu Leu Ile Phe Arg Tyr
130 135 140
Cys Ser Gly Ser Cys Asp Ala Ala Glu Thr Thr Tyr Asp Lys Ile Leu
145 150 155 160
Lys Asn Leu Ser Arg Asn Arg Arg Leu Val Ser Asp Lys Val Gly Gln
165 170 175
Ala Cys Cys Arg Pro Ile Ala Phe Asp Asp Asp Leu Ser Phe Leu Asp
180 185 190
Asp Asn Leu Val Tyr His Ile Leu Arg Lys His Ser Ala Lys Arg Cys
195 200 205
Gly Cys Ile
210

<210> 52
<211> 365
<212> DNA
<213> Artificial sequence

<220>
<223> Description of Artificial Sequence: synthetic gene
Page 23

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for Neublastin

<400> 52
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gcgttctcaa ctagtgcgg tgcgtgcact cggactggga caccgttccg acgaactagt 120
acgttttgcgt tttgttcag gatcttgcgt tcgtgcacgt tctccgcatt atctatctct 180
agcatctcta ctaggagccg gagcactaag accgcccggg ggatcttagac ctgtatctca 240
accttggttgt agacctacta gatacgaagc agtatcttc atggacgtaa actctacatg 300
gagaaccgtta gatagactat ctgcaaccgc atgtggctgt ctaggatgtat aatagggatc 360
cgct 365

<210> 53

<211> 365

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic gene
for Neublastin

<400> 53
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tgcaaaaagca aaaacaagtgc ctagaacacg agcacgtgca agagggctac tagatagaga 180
tcgttagatgat gatcctcgcc ctcgtgattc tggcggcggc cctagatctg gacatagagt 240
tggaaacaaca tctggatgat ctatgttcg tcataaaaaag tacctgcatt tgagatgtac 300
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gccga 365

<210> 54

<211> 114

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic gene
for Neublastin

<400> 54

Met Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly
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Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly
20 25 30
His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys
35 40 45
Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly
50 55 60
Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro
65 70 75 80
Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn
85 90 95
Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys
100 105 110
Leu Gly

<210> 55

<211> 442

<212> DNA

<213> Artificial Sequence

<220>

C045SEQLIST.TXT

<223> Description of Artificial Sequence: synthetic gene
for HisNeublastin

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tctgcgttct	caactagtgc	cggtgcgtgc	actcggaactg	ggacaccgtt	ccgacgaact	180
agtagtttt	cgttttgtt	caggatctg	tcgtcgtgca	cgttctccgc	atgatctatc	240
tctagcatct	ctactaggag	ccggagact	aagaccgccc	ccggatcta	gacctgtatc	300
tcaacccctgt	tgttagaccta	ctagatacga	agcagtatct	ttcatggacg	taaactctac	360
atggagaacc	gtagatagac	tatctgcaac	cgcgtgtggc	tgtcttaggat	gataataggg	420
atccggctgc	taacaaagcc	cg				442

<210> 56

<211> 442

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic gene
for HisNeublastin

<400> 56

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agacgcaaga	gttgcacg	gccacgcacg	tgagcctgac	cctgtggcaa	ggctgcttga	180
tcatgcaaaa	gcaaaaacaa	gtcctagaac	agcagcacgt	gcaagaggcg	tactagatag	240
agatcgtaga	gatgatcctc	ggcctcg	ttctggcg	ggcccttagat	ctggacatag	300
agttggaaaca	acatctggat	gatctatgct	tcgtcataga	aagtacctgc	atttgagatg	360
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<210> 57

<211> 135

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
HisNeublastin

<400> 57

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Ile	Asp	Asp	Asp	Asp	Lys	Ala	Gly	Gly	Pro	Gly	Ser	Arg	Ala
					20		25		30				
Ala	Gly	Ala	Arg	Gly	Cys	Arg	Leu	Arg	Ser	Gln	Leu	Val	Pro
	35		40		45								
Ala	Leu	Gly	Leu	Gly	His	Arg	Ser	Asp	Glu	Leu	Val	Arg	Phe
	50		55		60								
Cys	Ser	Gly	Ser	Cys	Arg	Arg	Ala	Arg	Ser	Pro	His	Asp	Leu
65		70		75		80							
Ala	Ser	Leu	Leu	Gly	Ala	Gly	Ala	Leu	Arg	Pro	Pro	Pro	Gly
	85		90		95								
Pro	Val	Ser	Gln	Pro	Cys	Cys	Arg	Pro	Thr	Arg	Tyr	Glu	Ala
	100		105		110								
Phe	Met	Asp	Val	Asn	Ser	Thr	Trp	Arg	Thr	Val	Asp	Arg	Leu
	115		120		125								
Thr	Ala	Cys	Gly	Cys	Leu	Gly							
	130			135									



maxell



SEQUENCE LISTING

USSN: 10/661,684, 9-12-2003

"NOVEL NEUROTROPHIC FACTORS"

BIGEN Ref: C045 DS C1P2

EASTSRD 4.0